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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP1914	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/SG 2003/000100	International filing date (day/month/year) 30 April 2003 (30.04.2003)	Priority Date (day/month/year) 8 May 2002 (08.05.2002)
International Patent Classification (IPC) or national classification and IPC IPC ⁷ : H01R 25/14; H02G 5/04		
Applicant NUTEK PRIVATE LIMITED		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examination Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>11</u> sheets.</p>	
<p>3. This report contains indications relating to the following items:</p> <p>I. <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II. <input type="checkbox"/> Priority</p> <p>III. <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV. <input type="checkbox"/> Lack of unity of invention</p> <p>V. <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI. <input type="checkbox"/> Certain documents cited</p> <p>VII. <input type="checkbox"/> Certain defects in the international application</p> <p>VIII. <input type="checkbox"/> Certain observations on the international application</p>	

Date of submission of the demand 05.12.2003	Date of completion of this report 21 July 2004 (21.07.2004)
Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87 A-1200 Vienna Facsimile No. 1/53424/200	Authorized officer KOSKARTI F. Telephone No. 1/53424/326

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/SG 2003/000100

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
 pages 1-41, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____.
- ☒ the claims:
 pages 42-45, as originally filed
 pages _____, as amended (together with any statement) under Article 19
 pages 46-52, filed with the demand
 pages 53-56, filed with the letter of 27 May 2004 (27.05.2004).
- ☒ the drawings:
 pages 1-44, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____.
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____.
- ☒ the claims, Nos. 78,79,80 filed with the demand.
- ☐ the drawings, sheets/fig _____.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as „originally filed“ and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/SG 2003/000100

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement			
Novelty (N)	Claims	1-91	YES
	Claims	----	NO
Inventive step (IS)	Claims	1-91	YES
	Claims	----	NO
Industrial applicability (IA)	Claims	1-91	YES
	Claims	----	NO

Citations and explanations (Rule 70.7)

The following documents have been cited in the Search Report:

D1: EP 0465099 A
D2: WO 87/01524 A1
D3: US 5688132 A

In the letter dated 27th May 2004, replacement pages 53 to 56 were filed. This resulted in the cancelation of claims 78, 79 and 80 which were the only claims not considered new and inventive with respect to D2 in the 1. written opinion. Since the questionable claims were canceled the subject matter of all the remaining claims 1 to 91 is now considered new and inventive with respect to the documents cited in the search report.

Industrial applicability is given.

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27. Apparatus as claimed in claim 26 wherein the conductive member forms part of the shield.

28. Apparatus as claimed in claim 27 wherein the conductive member and
5 conduit together form a conductive loop around the conductor.

29. Apparatus as claimed in any one of claims 19 to 28 wherein the cable run is enclosed.

10 30. Apparatus as claimed in claim 29 wherein the cable run is formed parallel to the conductor as a separate conduit.

31. Apparatus as claimed in any one of claims 19 to 30 wherein the cable run is arranged to receive data and/or communications cables.

15

32. Apparatus as claimed in claim 31 further comprising a cover, the cover having at least one opening arranged to receive a data and/or communications connector.

20 33. An electrical connector arranged to receive an electrical plug and having first and second electrical contacts arranged to engage corresponding conductors of an electrical power supply distribution apparatus, the contacts being disposed at opposed ends of an arm rotatable between a first position in which the contacts are arranged to disengage from the conductors and a
25 second position in which the contacts are arranged to engage with the

conductors, wherein the connector further comprises a third electrical contact arranged to earth the connector before the first and second contacts engage the corresponding conductors.

5 34. A connector as claimed in claim 33 wherein the ends of the arm are resiliently displaceable.

35. A connector as claimed in claim 34 wherein each end is of hooked form.

10 36. A connector as claimed in claim 33, wherein the contacts are resiliently displaceable.

37. A connector as claimed in claim 33 or 36, wherein a part of the contacts are received inside the rotatable arm.

15

38. A connector as claimed in claim 37, wherein a part of the contacts protruding out of the rotatable arm is hemispheric shape.

39. A connector as claimed in any one of claims 33 to 38 further comprising
20 means arranged to allow engagement of each contact only with a selected conductor.

40. A connector as claimed in claim 39 wherein the means comprises a formation offset relative to the axis of rotation of the arm.

25

41. In combination, a connector as claimed in any one of claims 33 to 40 and a
said electrical power supply distribution apparatus comprising a conduit
containing at least one elongate conductor, the conduit having an opening
through which the connector is able to be inserted to connect electrically
5 with the conductor.

42. A combination as claimed in claim 41 further comprising a conductive
member disposed between the opening and the conductor and resiliently
displaceable by a said connector to provide access to the conductor.

10

43. In combination a connector as claimed in claim 39 or claim 40 and a said
electrical power distribution apparatus comprising a conduit containing two
elongate conductors, the conduit having an opening through which the arm
of the connector is able to be inserted, and means arranged to allow
15 engagement of each conductor only with a selected contact of the arm.

44. A combination as claimed in claim 43 wherein said means comprises first
and second formations offset relative to said opening.

20 45. A connector as claimed in any one of claims 33 to 40 further comprising
arm protection means arranged to protect the arm in the first position.

46. A connector as claimed in claim 45 wherein the protection means
comprises first and second formations, the arm, in the said first position,
25 lying between the formations.

47. Apparatus for distributing electrical power and/or communication signals,

the apparatus comprising an elongate conduit containing at least one
elongate conductor, the conduit having an elongate opening arranged to
receive a connector to connect electrically with the conductor and a
resiliently displaceable flap for the opening wherein the flap is co-extruded
with a part forming a cover for the conduit.

48. Apparatus as claimed in claim 47 further comprising a second flap for the
opening.

49. Apparatus as claimed in claim 47 or 48 wherein the flap and part are co-
extruded from the same material but of different hardness.

50. Apparatus as claimed in claim 47 or 48 wherein the flap and part are co-
extruded from different materials.

51. A terminal connector arranged to engage a conduit containing at least one
elongate conductor and having an opening arranged to receive a power
point connector or an electrical plug to connect electrically with the
conductor, the terminal connector having means slidably connectable to an
end of a said conduit and to said conductor and arranged to connect the
conductor to a mains supply or the conductor of another said conduit.

52. A connector as claimed in claim 51 wherein said means comprises at least one contact arranged slidably to engage with an end of a said conductor.

5 53. A connector as claimed in claim 52 comprising two said contacts arranged to engage opposed sides of a said conductor.

54. A connector as claimed in claim 52 or claim 53 wherein the contact is arranged to engage a cylindrical conductor.

10 55. A connector as claimed in claim 52 comprising three said contacts arranged to engage two opposed sides of the conductor.

56. A connector as claimed in claim 53 wherein the contacts are arranged to engage a sheet-like conductor.

15

57. A connector as claimed in claim 53 wherein the contacts are arranged to engage a T-shaped conductor.

58. A connector as claimed in any one of claims 51 to 57 wherein said means comprises at least one projection arranged to be slidably receivable in a corresponding socket of a said conduit.

20

59. A connector as claimed in claim 58 as dependent directly or indirectly upon claim 56 wherein the projection partially surrounds the contact.

25

60. A connector as claimed in claim 51 wherein said means forms a channel arranged to engage slidably with an end of a said connector.

61. In combination, two connectors as claimed in any one of claims 51 to 60
5 connected together so that said means project outwardly so as to be connectable to adjacent said conduits.

62. A combination as claimed in claim 61 wherein the connectors are connected via a base member.

10

63. A combination as claimed in claim 61 or claim 62 wherein the connectors are electrically connected together.

64. Electrical power distribution apparatus comprising: a metal conduit
15 containing at least one elongate conductor, the conduit having an opening arranged to receive a connector to connect electrically with the conductor; and the conductor being connected to the conduit via an insulator, whereby the conduit forms an EMI shield for the conductor.

20 65. Apparatus as claimed in claim 64 further comprising a conductive member disposed between the opening and the conductor and resiliently displaceable to provide access to the conductor.

66. Apparatus as claimed in claim 65 wherein the member forms part of the
25 shield.

67. Apparatus as claimed in claim 66 wherein the member and conduit together from a conductive loop around the conductor.

5 68. Apparatus as claimed in any one of claims 64 to 67 further comprising a cable run separated from the conductor by the shield.

69. Apparatus as claimed in any one of claims 64 to 67 further comprising a further conduit separated from the conductor by the shield.

10

70. Apparatus as claimed in claim 69 wherein the said conduit contains at least one elongate conductor and has an opening arranged to receive a data and/or communications connector to connect electrically with the conductor.

15 71. An electrical plug arranged to receive one or more electrical wires for coupling to an electrical device, the plug having first and second electrical contacts arranged to engage corresponding conductors of an electrical power supply distribution apparatus, wherein the contacts are disposed at opposed ends of an arm rotatable between a first position in which the contacts are
20 arranged to disengage from the conductors and a second position in which the contacts are arranged to engage with the conductors.

72. An electrical plug as claimed in claim 71 wherein the ends of the arm are resiliently displaceable.

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73. An electrical plug as claimed in claim 71 wherein each end is of hooked form.

74. An electrical plug as claimed in claim 71 wherein the contacts are resiliently
5 displaceable.

75. An electrical plug as claimed in any one of claims 71 to 74 further comprising means arranged to allow engagement of each contact only with a selected conductor.

10

76. An electrical plug as claimed in claim 75 wherein the means comprises a formation offset relative to the axis of rotation of the arm.

77. An electrical plug as claimed in any one of claims 71 to 76 wherein each
15 contact is connected electrically to a said electrical wire.

78. Apparatus for distributing electrical power and/or communication signals, the apparatus comprising two conduits separated by an EMI shield, each conduit containing at least one elongate conductor and which includes an
20 opening arranged to receive a connector to connect electrically with the conductor.

79. Apparatus as claimed in claim 78 wherein one conduit is used to distribute communication signals.

25

80. Apparatus as claimed in claim 78 wherein one conduit is used to distribute electrical power.

81. Apparatus as claimed in claim 80, further comprising a conductive member
5 in said conduit, the conductive member being disposed between the opening and the conductor of said conduit and being resiliently displaceable by a said connector to provide access to the conductor of said conduit.

82. An electrical socket comprising
10 a housing containing at least one conductor, the housing having an opening through which a connector is able to be inserted to connect electrically with the conductor, and
a conductive member disposed between the opening and the conductor and resiliently displaceable by a said connector to provide access to the
15 conductor.

83. An electrical socket as claimed in claim 82 wherein the conductive member forms an earth connector.

20 84. An electrical socket as claimed in claim 82 or 83 wherein the conductive member is resiliently biased towards the opening.

85. An electrical socket as claimed in any one of claims 82 to 84 wherein the opening is an elongate slot.

86. In combination, a socket as claimed in any one of claims 82 to 85 and a said connector having an electrical contact arranged to engage the conductor.

5 87. A combination as claimed in claim 86 wherein the socket comprises first and second conductors and the connector comprises first and second electrical contacts arranged to engage respective said conductors.

10 88. A combination as claimed in claim 87 wherein the contacts are disposed at opposed ends of an arm rotatable between a first position in which the contacts are disengaged from the conductors and a second position in which the contacts are engaged with the conductors.

15 89. A data and/or communications terminal connector arranged to engage a conduit containing at least one elongate conductor and having an opening arranged to receive a data and/or communications connector to connect electrically with the conductor, the terminal connector having means slidably connectable to an end of a said conduit and to said conductor and arranged to connect the conductor to a data and/or communications cable arranged to
20 provide communication signals.

90. A terminal connector as claimed in claim 89 wherein said means comprises a U-shaped terminal arranged to engage slidably with an end of a said conductor.

91. An extension cable including apparatus as claimed in any one of claims 1 to 11, 15 to 17, 19 to 30, 47 to 50, 64 to 70 and 78 to 81, a combination as claimed in any one of claims 12 to 14, 18, 41 to 44, 61 to 63 and 86 to 88, a connector as claimed in any one of claims 33 to 40, 45, 46, 51 to 60, 89 and 90, an electrical plug as claimed in any one of claims 71 to 77, and/or an electrical socket as claimed in any one of claims 82 to 85.